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THE METAMORPHOSIS OF UNKNOWN ANIMALS INTO FABULOUS BEASTS AND OF FABULOUS BEASTS INTO KNOWN ANIMALS

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ABSTRACT: The unknown animals with which cryptozoology is concerned are by definition incompletely known animals. As a result, we unconsciously tend to fill the gaps in our knowledge of them by borrowing missing traits from the mythical archetype that they best seem to fit. The less we know of them, the more mythicized they are thus bound to become. When mythopoeic thought has to supply the lion's share, it is no wonder that such animals may be considered mere figments of the imagination.

At the same time, when a conspicuous animal is discovered by zoology and is scientifically described, it is often found to be at the root of the rumors which previously surrounded a particular "monster," which then becomes a well-authenticated new species. This has happened repeatedly throughout the history of zoology.

So it is that two opposite transmogrifications—from the unknown to the fabulous and from the fabulous to the known—normally succeed each other along our progressive inventory of the animal world. This precedence of a mythical apprehension upon a rational treatment may well be linked with the succession of steps which the human brain has to perform for a proper integration of all original messages from the outer world. To achieve this, such messages have to pass through the limbic system, where they seem to be emotionally tinted, and prepared to be categorized according to inborn mental structures—and thus more or less distorted and disguised—before being subjected to the action of reason in the cerebral cortex.

The main objective which is generally raised to the existence of apparently unknown animals is that they are adorned with too many fantastic traits to be taken seriously; that is, to be considered flesh-and-blood species worth listing in zoological catalogues. Sober-minded scientists—too sober-minded perhaps—and narrow-minded folklorists often jump to the conclusion that such obviously "legendary monsters" are but figments of human imagination. This debunking attitude actually betrays not only an ignorance of the history of zoology, but also a total misunderstanding of the mythicizing process which happens to pervade our *whole* apprehension of the world and its subsequent reconstruction in our minds.

Humans, Emotional Animals Smitten with Reason

From a zoological point of view, humans are just like other animals. Even their general anatomy is not particularly original. They are bipedal beings like half of all terrestrial vertebrates—one has merely to think of the birds, which form the order containing the largest number of species: more than 9,000! Plato had already pointed out judiciously in his *Politicus* that humans are nothing but featherless bipeds.

From a psychological view, however, humans are much more peculiar animals. Like all the others, they are, of course, motivated mainly by their emotions, but they are certainly the only ones which try to pass themselves for essentially rational beings.

Strikingly enough, the mental images that are generated in their minds by all and sundry sensations, are categorized at once according *not* to some logical system, but actually to the particular feeling or emotion which is associated with them: gratification or unpleasantness, pleasure or pain, warmth or coldness, fear or anger, joy or sadness, attraction or repulsion, appetite or disgust, lust or aversion, admiration or contempt, envy or scorn, love or hate, etc. As a result, numerous clusters of sensorial messages of all kinds—forms and colors, sounds, odors, tastes, and feelings—usually linked with a specific emotion, are planted deeper and deeper in the mind of each of us. And, since all humans are built of the same biological units identically organized, these significant clusters, which could be called "semantic pools," are grossly similar all over the world. As the environment varies in every country, each human culture uses its own imagery, and this accounts for all superficial differences.

Now, it is quite natural that even the structure of our thoughts should be dependent on the finer anatomy of our nervous system, and on its functioning. As a matter of fact, it is an interplay of constant associations—by no means fortuitous but based nevertheless upon mere resemblances, analogies and parallelisms—which governs our mental processes. It all happens as if every concept had its own array of natural harmonics. This helps to explain how easily symbols are born from an almost imperceptible shift, how real life can be disguised in our dreams, how poetic images spring up, how a language—and later writing—develops step by step, how a simple list of names can convey an ethical message (how, for instance, what was originally meant to be simply a catalogue of all known animals, the *Physiologus,* became almost spontaneously the moralized bestiary of the Middle Ages), and, finally, how the imaginary works in general. If imagination deserves to be called *la folle du logis* (the madwoman of the household), as Malebranche (1674) proposed, its madness is surely of the paranoiac type, because it is always strictly systematized. It is this rigorously structured way of thinking which seems to be responsible for what we usually refer to as "mythical thought," or just "myth."

The Dawn of Biomythology

The French philosopher of science Léon Brunschvicg once stated: "Primitive man wants to explain everything, civilized man acknowledges gaps of ignorance" (Brunschvicg 1934). This distinction between "primitive" thought and "civilized" thought now strikes us as artificial. Whether we like it or not, the Unknown frightens us all: to say the least, we find it extremely inconvenient. If, to push it away, the "primitive" mind invents explanatory myths, the modern scientist fills the gaps in his knowledge by constructing rational hypotheses. It amounts to the same thing.

Mythopoeic thought appears to me, more and more, to be an evolutionary adaptation enabling the members of our species to cope with the traumas linked with new experiences, which cause all the more anguish as they have never been lived through before.

Owing to the clustering process already described, it would seem that all the information received through the senses from the outside world, when passing through the limbic system—that part of the central nervous system sometimes dubbed the "emotional brain"—are stored in the same mental categories, distorted and completed according to the same deeply embedded stereotypes, and finally forced into the same molds of the mind as those that shape our mythologies, our heroic epics, and our "old wives' tales." What Carl Gustav Jung has called "the collective unconscious" (Jung 1933) is most probably nothing more than a specific, genetically programmed adaptation serving to protect the mind against psychological disorders, just as how the entire organism has gradually developed natural defenses to fight against the various threats to it.

This hypothesis is but the logical extension and end of the progress of biological and human sciences during the last decennia. Since Thomas H. Morgan's chromosomal theory of heredity (Morgan 1919), we have known that, in every living organism, all physical traits are transmitted by the genes inherited from its parents, and this is true also of all the processes which rule the development of the various organs, and even of the mechanisms that set the functioning of the whole organism. It has been suspected for a long time that the same holds true with respect to the current behavior of living beings, and, therefore, of the psychological processes linked to it. This has now been largely established through the results of the ethological research conducted by Konrad Lorenz (1965) *et al.,* and crowned by the sociobiological theory of Edward O. Wilson (1975). Even our feelings seem to be genetically programmed, which, of course, greatly reduces the influence of culture on our personal development. Noam Chomsky (1957), the father of modern linguistics, went even further by showing that language itself—at least some fundamental characteristics of it, such as grammar—is inscribed in our genetic heritage. The capital discovery by Claude Lévi-Strauss of "structural invariants," which shape the thought of all the peoples of the

world, proves that the very organization of our understanding is ruled by certain rigid mechanisms obviously associated with some of our genes (Lévi-Strauss 1958, 1962).

What I have personally been trying to discover in this perspective, adopted by a sociologist like Gilbert Durand (1984), a mathematician like René Thom (1980), and biologists and geneticists such as C. H. Waddington and, more recently, Rupert Sheldrake (1981), are the biological reasons which necessitated this structuring of the mind expressed in all the different facets of myth. It is, in my opinion, the fear of the Unknown or, more precisely, of the sundry mental disturbances which the vicissitudes of our humble individual lives could bring about when they are experienced for the first time: the painful experience of birth, expulsion from the womb, cold hostility of the world outside, momentary deprivation of the first and deepest alimentary bliss, thwarted passion for the mother, rivalry with the father, that kill-joy; and soon, competing brothers and sisters, feeling lost, first solitude; then, unsatisfied sexual desire, strife and defeat, disappointment and humiliation, tricks and treason, separation, death itself. What enables us to experience these daily tribulations as familiar is that they happen to be written in our genes before we are confronted with them. This is also why the scenario of our lives seems to follow the same basic pattern on which humans embroider all over the world to describe the awe-inspiring manifestations of the deified forces of nature, to tell the high adventure of the great heroes' career, or the simple fairy tale, even the popular joke. Imagination is strictly limited in the choice of both plots and motives, and so planned are the broad outline of its products.

I am convinced that, someday in the not too distant future, this situation will be checked experimentally by neurophysiologists, and that a new discipline of science will then emerge, one which I would name "biomythology."

We All Like a Good Monster

What happens in our minds when we are confronted with the problem of apparently new animals, which represent the Unknown in zoological systematics. Well, to neutralize the frightening nature of this particular Unknown, or its simple inconvenience—and thus to comfort us—we will be irresistibly driven to identify an animal of this sort with one of the more familiar forms of our mythical world, which Jung called "archetypes," choosing of course the one it best seems to fit. These archetypes are what Freud used to refer to as "archaic residua."

Fabulous beings are almost innumerable. To be convinced of this, one has only to browse through the pages of the incomparable *Dizionario Illustrado dei Mostri* (Illustrated Dictionary of Monsters) by Massimo Izzi (1989)—a must for both cryptozoologists and mythologists. This volume numbers

several thousand entries. However, when one carefully analyzes the symbolic significance of the various fantastic beings listed, one finally realizes that it is possible to reduce them all to a score or so (Izzi 1982). This results from the fact that each of them seems to be linked with one or another of our fundamental psychological problems, which are of course relatively limited. "Monsters," as we call them, are actually a reflection of them on the surface of our unconscious, not only of our individual unconscious, but also of the "collective unconscious" of our species, revealed with such finesse by Carl Jung.

Now, let us rapidly review what I would thus call our "fundamental monsters," and try to discover what each of them really means to us.

First of all, the *Chimera,* this absurd assemblage of anatomical parts borrowed from totally unrelated animals, is the prototype of all apparently impossible beings, *whether real or faked*: the platypus, an egg-laying mammal; the inconsistent horned hare, and its offspring (the innumerable Wolpertinger, which are a tradition in German-speaking countries, and the North American jackalopes); the chalicothere, an ungulate, which is a hoofed animal yet armed with terrible claws; the basilisk, a cock (rooster) which lays eggs (and snake eggs at that); the jumar, an alleged cross between a horse and cow; in short, the endless file of paradoxical creatures: dwarfish giants and gigantic dwarfs, spotless leopards and zebras without stripes, flying reptiles and tree-dwelling fishes, birds both wingless and furry, plant-eating carnivores, and—this is not cryptozoology any more, but cryptophytology—man-eating plants and animal-bearing trees.

All these chimera-like beings actually deliver a message of hope, as they prove that everything is really possible, including our wildest delusions. The *Western Dragon* is a personification of evil, of everything we must fight in order to survive with dignity. The *Eastern Dragon* is, on the contrary, a benevolent creature symbolizing authority, strength, experience, wisdom and goodness, everything we should honor and respect. The *Unicorn,* phallic symbol if there ever was one, is the image of aggressive virility, male potency, but liable to be vanquished by a defenseless woman at her most pure, most naive, but at the same time most sly—her surest weapons! The *Mermaid,* on the other hand, represents the enveloping, devouring mother, the Belle Dame sans Merci, the vamp, to whom the male is but an eternal victim. Being cannibalistic as well, she also awakes in men the nostalgia of former times, when he floated securely in the amniotic fluid in his mother's womb. The *Amazon* fills a similar niche on the social level: she does not seduce the male in order to eat him, but she rapes him and keeps him as a castrated slave once his reproductive duty is done. The *Wild Man,* the satyr, offers a double aspect: on the one hand, he enhances the human civilized state by representing its undeveloped, bestial, repulsive counterpart (Bernheimer 1952); on the other hand, he evokes the idyllic, nostalgic image of a lost

paradise; animality seen as freedom from the constraint of work and the harrowing consciousness of sin. The oversexed *Hermaphrodite* fulfills the dreams of those who want to experience the feelings and sensations of both men and women. The *Ogre* and *Ogress,* man-eating giants, represent the adult and parental world as seen through the eyes of the terrified child.

The *Little People,* gnomes, brownies and leprechauns, show the other side of the same myth, a transposition of the world lived in by children, set apart as they are by their small size: imperfectly understood, seen as belonging to an inferior level, and yet compelled to do the adults' biddings in order to merit their protection and win their favors. The greedy *Bogey-Man,* the beast that eats people, is as ambivalent as many other monsters: he embodies the fear of being devoured, suppressed, stamped out, but also the yearning—nostalgic in a way—to return to the warm security of the maternal womb. The *Werewolf* apparently emphasizes our fear of a sudden reversal to the animal status, but his ill fate actually induces us not to yield to our lower instincts, imperfectly repressed. The *Lake Monster,* hidden under the surface of murky waters, is the image of all the perverse, shameful, unspeakable thoughts we hide in the very depths of our hearts. The *Great Sea Serpent* is an eloquent symbol of the Devil, the Prince of Darkness, in this case of what was formerly called the "outer darkness," the vastness of the oceans beyond the horizon, imagined as the chosen domain of the powers of Evil. And just as the *Tentacular Monster,* surging up from the deep, represents the dangers that threaten us from below (from inside, our inner conflicts), the *Kidnapping Bird,* be it Roc-Bird, Thunderbird, or even the more reptile-like Griffin, represents those that may strike us from on high (the Demiurge, the moral authority that judges us, and, as the case may be, smites us).

The *Phoenix,* messenger from a marvelous realm far away, and always reborn from its ashes, reminds us of the lost Eden, the country where death was not, and encourages us to believe in a possible return to that Golden Age. The *Vampire* also evokes dreams of immortality, but reminds us of its darker side, the malediction that follows it like a shadow. And, at last, the long horde of *Different Men*—headless or bicephalous, one-eyed or with a hundred eyes, noseless, mouthless, or wrapped up in enormous ears, one-legged or many-legged, four-footed or with feet turned backwards, dog-headed or bird-headed, with goatlike or horselike bodies—stresses what we escaped from by being as we are, and thus reassures us, in a way, of our station, however miserable it may seem (Heuvelmans 1983, 1987).

To sum up, there are myths for every age, every sex, even for every singularity. That is why they attract, charm, trouble and captivate us, why they enlighten us, be it "as through a glass darkly," and on a whole, comfort us. No wonder we are so fond of monsters and imaginary beings, in films and in books!

From Obscurity to Fame

Paradoxical as it may seem, fabulous monsters are surely the animals nearest to us, the most closely bound up with our daily lives. The dog, the cat, the horse, and some others live with us; the mythical beasts live *inside us.* In the waves of our unconscious tumble mermaids, Krakens, and sea serpents; the forest bordering this inner sea shelters unicorns and dragons, satyrs and Amazons, ogres and pixies, werewolves and vampires. And across the sky of our dreams flies the giant Roc, clutching elephants in its talons, and the Phoenix, eternally returning to the paradise of its birthplace. Such myths concern us all, as the guardians of our soul's order.

That is the deeper reason why we are so eager, so impatient even, to shift the hide of our fabulous beasts onto the shoulders of ordinary, sometimes quite unglamorous, flesh-and-blood animals; an operation which is that much easier if the latter are not well-known, hardly known, or even not yet quite known. . . .

The apparently unknown animals with which cryptozoology is concerned—i.e., those which are heard of either because they are named and described by natives, or reported to have been sighted by travelers, or merely because there are traditions or depictions extant of them—are by definition never totally known. They are, in fact, *incompletely known* animals. As a result, we unconsciously tend to fill the blank spots and gaps in our knowledge of them by borrowing some missing traits, sometimes of a fantastic and even supernatural nature, from their mythical archetype. The less we know of them (either because they are aquatic animals of which we can only catch a fleeting glimpse, or because they are nocturnal, or burrowing, or hidden in dark equatorial forests or inhospitable deserts), the more mythicized they are thus bound to become. So it is no wonder that little-known animals will sooner or later be considered what we call "monsters," or "fabulous beasts."

Now, when one of these animals is eventually discovered by zoology and is scientifically described, it is sometimes found that is was previously taken for an imaginary creature. Nevertheless, the beast in question, fated to be stripped someday of all its fancy attributes, has become, almost overnight, a well-authenticated new species, rising from a sometimes ludicrous folkloristic reputation, and even a disputed cryptozoological fame, to a respectable and recognized zoological status.

The mythifying process can sometimes be carried to the point of altering its object beyond recognition. Since the manatee has pectoral mammae—like its cousin the elephant and also humans—and a body that tapers to a fishlike tail, it has always been identified, on both sides of the Atlantic, with the fascinating mermaid—despite its (to our eyes) ugly face—and by the same token, considered cannibalistic, and suspected of the most horrible

crimes. Along Central African rivers, manatees are usually described as aquatic vampires, draining imprudent bathers of their blood, even of their brains, by sucking them through the nostrils. Now, can anyone imagine a more peaceable, inoffensive creature than this sea-cow, which passes its days lazily browsing water hyacinths and other succulent plants? (Heuvelmans 1978).

The original unicorn was actually a man with a horn on his forehead. However, when a similarly endowed quadruped from the Orient was described by a Greek physician named Ktesias, this animal took the place, in our mythic pantheon, of the one-horned man, whose ithyphallic state was perhaps too crudely suggested. It was actually nothing but the Indian one-horned rhinoceros. This spectacular beast was subsequently mythicized to such an extent—becoming a graceful white horse with cloven hooves and a narwhal's ivory tusk—that the Renaissance encyclopedists of zoology failed to recognize it, and thus classified the armor-plated rhinoceros side by side with the slender unicorn (Heuvelmans 1963).

From Fabulousness to Zoological Status

These are but two examples of transmogrification dating from ancient times, but nothing has really changed since.

In 1828, a specimen of the largest fish presently known, the whale shark (*Rhineodon typus*), was harpooned in Table Bay, near the Cape of Good Hope. The representatives of this species are said to grow up to almost 20 meters (65 feet!), but are quite harmless, as they feed only on plankton. One of them, locally known as *chacon,* had nevertheless been spreading terror for several years in the Bay of Manila, in the Philippines, and had been described in the press as a most voracious sea serpent, marked with leopard's spots, another sign of ferocity (Heuvelmans 1965, 1968).

The largest of all rays, the great devilfish, another plankton-feeder, sometimes spanning 6 meters (18 feet) and weighing then 1.5 tons, was described at about the same time, in 1829, as *Manta birostris.* It had previously been spoken of, along the coast between Panama and Ecuador, as a sort of living counterpane, always ready to jump clear of the water and pounce on the fisherman's small boats, swallowing the crew at once. And years later, in 1866, owing to the two long appendages that flank the corners of its wide mouth (whence *birostris*), it was still taken for a true "monster" by a prominent South American philologist, Don Enrique Onffroy de Thoron: a gigantic prehistoric frog with the white enfolding arms of a classical mermaid (Heuvelmans 1958).

It was only in 1856 that the most unlikely of all sea monsters, the *kraken* of Scandinavian folklore, was unmasked at last, and scientifically named *Architeuthis.* It had been rumored for centuries as a tentacular island-beast

that was in the habit of picking up sailors from their boats with its innumerable slimy arms. At the same time, some stranded carcasses of a smaller size had been described variously as "sea-monks," "sea-bishops" and "sea-knights." Both the "living island" and the various "mermen" turned out to be a truly gigantic squid, which can be more than 15 meters (50 feet) in length, probably a *lot* more, and weigh several tons (Heuvelmans 1958).

All this happened, admittedly, in the immensity of the oceans, but also in the terrestrial realm there has often been some sudden turn in events just as spectacular.

In 1816, the zoological world realized with a shock that the fabulous *Mê* of Chinese legends—a black and white bear-like animal, with the trunk of an elèphant, the eyes of a rhinoceros, the tail of cow, and the feet of a tiger, which was credited moreover with feeding on iron and copper—was, in fact, an Indian tapir, *the* Indian tapir (now known as *Tapirus indicus*). An alien animal indeed, since tapirs were supposed to be strictly confined to South America (Heuvelmans 1984).

On that very continent, in 1829, a kind of "hairy ghost" of Colombian folklore, the *pinchaque,* said to be as big as a horse, was discovered to be, for its part, a high mountain tapir (*Tapirus pinchaque*), which had thus far preserved is incognito status (Heuvelmans 1984).

During the past centuries, there were rumors all over equatorial Africa about a hairy, bloodthirsty, and lascivious giant, who bludgeoned elephants with a club and dragged women into the forest to rape them. In the end, this half-satyr, half-ogre turned out to be the gorilla (*Gorilla gorilla*), a large man-ape, which we now know to be a quite unaggressive, good-natured animal, practically vegetarian, and much less sex-obsessed than its naked cousin, *Homo.* But now that we know him much better, after having properly demythicized him, and now that the job of the archetypic Wild Man thus looks vacant again, the gorilla's bad reputation has had to be passed on to another anthropoid ape, still unrecognized, from the Himalayas. Nowadays, it is he who is reported to fell yaks with his bare fists before disemboweling them and drinking their blood, and to abduct girls, preferably young: the Abominable Snowman, to give him his name, a complete misnomer if there ever was one, as there is nothing abominable about him, he is not a man, and he does not live in the snow (Heuvelmans 1962a, 1962b).

When, just before World War I, a small Indonesian island yielded the discovery of the largest lizard yet known, a monitor lizard over 3 meters (10 feet) long (*Varanus komodoensis*), the common name it received was, quite naturally, the Komodo dragon. It was, however, of rather modest proportions compared to the largest crocodiles, which are at least twice as long, and weigh 8 times more, theoretically at least (sometimes over a ton). Those truly monstrous creatures are actually not honored with the impressive

name of "dragon" today, because they were too well known—and for too long—to be identified with some mythical beast.

The Marriage of Myth and Science

Such examples could be multiplied according to order. The unfolding of events is invariably the same. After having been largely mythicized because they were too little known, or only known by hearsay, ordinary animals become fabulous, and fabulous animals are bound to be stripped of their fantastic attributes as soon as they are closely scrutinized by science. Two apparently opposite metamorphoses—from the unknown to the fabulous and from the fabulous to the known—actually succeed and complete each other along our progressive and rarely sudden discovery of resolutely new forms of animals.

This is exactly what happened also during the human step-by-step conquest of new lands. One should remember how, in the past, far-away islands, unexplored countries, or even whole continents, which had allegedly been sighted or visited by undaunted sailors or adventurers, were first rumored to be either dreamlands or nightmarish places, or a subtle mixture of both. They were always very vaguely located, sometimes described as being covered with lush vegetation, bearing delicious fruits, sometimes said to be totally barren, but always littered with invaluable treasures—guarded, however, by terrifying beasts—and populated with enchanting, sensuous females, but unfortunately also with monstrous cannibalistic men. It is only gradually that these "Lands Beyond,"—as they were once called in an authoritative book by L. Sprague de Camp and Willy Ley (1952)—were discovered and duly explored, if and when they were found, which did not necessarily always occur. To wit, Atlantis, Lemuria, Mu, and the *Terra australis incognita*: Vinland, and the lands of Prester John, of El Dorado and of the Amazons; Brendan's Island, and the islands of Thule, Ophir, Antilia, and Taprobane, have been faced with very different fortunes. It all depended on the extent to which they had been mythicized and sometimes confused with each other. But all of them passed for a certain period through a state of fabulousness.

One may even consider this mental process, in which myth and fact seem to play hide and seek, to be quite normal, if not inescapable, whenever we stumble and grope about hesitantly into the darkness of *any* area of knowledge.

If a mythical apprehension of an unknown phenomenon always precedes its scientific treatment, it is quite naturally because emotion begins at once, reason intervening only afterwards to control it if possible. Incidentally, science—which is supposed to be the result of soundly reasoning upon facts—should never be taken as equivalent to truth, and even less to "the truth, the whole truth, and nothing but the truth." It is nothing but that part of

our knowledge which is liable to quantification; that is, which can be measured and thus expressed in mathematical formulas, and so transmitted to other rational beings. To put it differently, science is simply rationalized knowledge. Unfortunately (for scientists), much of what we know happens to be irrational—to *know* a woman, for instance, or to define charisma, or to tell the difference between what is clockwise and what is counterclockwise. These phenomena cannot be expressed in figures, and this stresses the limits of science very clearly.

To summarize, mythification and rationalization succeed, overlap, and complete each other. Fact and folklore are so closely interwoven that it is often difficult to separate them sharply. As a result, to be able to understand mythology as well as science—or, under the circumstances, cultural folklore as well as cryptozoology—both approaches are imperative.

Supported thus jointly by folklorists and cryptozoologists, monsters are not about to die. Not that they are eternal: surely they were born with human thought and will vanish with it. Yet, I wish a long survival to all the animals of flesh and blood that were successively embodied in them, that somehow fed them and kept them alive, all for the comfort of our souls. We owe them that at least.

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